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Utility Patent Application

Of

Richard C. Everett

For

SEAT FOR COLLAPSIBLE JOGGING STROLLER

Attorney for Applicant: Edward E. Roberts
P.O. Box 3206
Dana Point, CA 92629
(949) 365-5717

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SEAT FOR COLLAPSIBLE JOGGING STROLLER

BACKGROUND

The background of the invention will be discussed in two parts.

Field of the Invention

The invention relates to seats for jogging strollers and more particularly to a seat for a collapsible three-wheeled jogging stroller that does not require removal prior to collapsing of the stroller and provides lateral seating support to the user.

Description of the Prior Art

Strollers configured for one or more children have evolved into vehicles that can be utilized while running or jogging. Such vehicles are referred to as jogging strollers, whereby a person, while pushing the child therein, may conveniently exercise by jogging or running. Such jogging strollers are generally formed of lightweight tubular frame members with three wheels, and often, to facilitate transportation and storage, are designed with foldable or collapsible assemblies.

The seats for such joggers are generally formed of a flexible cloth-like material having configuration such that the child is seated in a desired seated location within the stroller frame. The seats are most often attached to the side frame members of the stroller with fasteners such as spring-biased hooks, clamps, snaps or other like fasteners for enabling positioning and securing of the seat in place.

With the advent and popularity of foldable, or collapsible, jogging strollers seat design has become more important so as to prevent undue difficulty in collapsing of the stroller. Prior art jogging strollers typically include seats that must be removed prior to collapsing of the stroller. Otherwise, leaving the seat attached to the frame members during collapsing requires the seat to be designed for collapsing along with the frame members; thus making collapsing more difficult and unwieldy, if not impossible. For instance, the seats normally include transversely extending stability means fixedly attached to side frame members to provide seat stiffening and support as well as to maintain the seat back in an upright position. In attaching to side frame members, and often protruding beyond the sides of the seat, this configuration required that the seat be removed prior to collapsing of the stroller.

One prior art seat for a foldable frame assembly is shown and described in U.S. Patent No. 5695,212 issued to Hinkston on 09 December 1997. The seat is attached to the frame assembly and must be removed prior to preparation for transportation or storage. No provision, other than attachment to the stroller frame, is made for transverse support of the seat to keep it from sagging inwardly and downwardly when occupied.

Another seat is shown and described in U.S. Patent No. 5,934,759 issued to Smith on 10 August 1999. The seat is removably attached to the frame assembly and formed as a one-piece member of cloth-like material. The seat must be removed prior to preparation for transportation or storage. The side portions are configured for attachment to frame members of the stroller to hold the seat in proper orientation with no provision, other than attachment to the stroller frame, made for transverse support of the seat to keep the seat from sagging when occupied.

Such seats are illustrative of the varied arrangements whereby attempts have been made to improve and simplify seating configurations for foldable or collapsible jogging strollers. Thus, prior art seating designs remain limited in providing non-removal characteristics for foldable or collapsible strollers while maintaining transverse seat support and integrity.

What is needed is a flexible seat for a jogging stroller or the like that does not require removal prior to collapsing of the stroller, provides lateral seating support to the user, and is formed of flexible cloth-like material that is simple and inexpensive to manufacture.

It is thus an aspect of the present invention to provide a new and improved seat for a collapsible jogging stroller that does not require removal of the seat prior to preparing the stroller for transportation or storage,

It is also an aspect of the present invention to provide a new and improved seat for a stroller having a simple transversely extending seat member that provides seat support to prevent it from sagging inwardly and downwardly when occupied.

It is still another aspect of the present invention to provide a new and improved seat for a collapsible stroller having seat means for preventing obstruction by the seat during the collapsing process

Other aspects, features and advantages of the invention will become apparent from a reading of the specification, when taken in conjunction with the drawings, in which like reference numerals refer to like elements in the several views.

SUMMARY

The present invention is directed to the need for an improved flexible seat for a collapsible jogging stroller, which seat is not required to be removed prior to collapsing the stroller for transportation or storage. The seat has a seat back portion, a seating portion, leg rest portion, and side portions and is contoured to the anatomy of a child. It is formed of a one-piece flexible cloth-like material designed for removable attachment to the frame of the stroller by means of snaps or other suitable fasteners placed at selected peripheral seat portions. The seat includes a transversely extending seat-defining member, such as a bar member, positioned between the seating portion and the leg rest portion approximate the under-knee location of the seated child to add stiffening and support to the seat. This stiffening results in greater comfort to the user as it prevents collapsing, inwardly and downwardly, of the seating portion when the child occupies the seat. In this manner the bar member defines the interface of the seating portion and the leg rest portion. The bar member is embedded in or otherwise attached to the seat material in a free-floating manner not attached to the frame of the stroller. Thus, upon collapsing of the stroller the seat bar member does not interfere with or obstruct the collapsing process.

DRAWINGS

Figure 1 is a perspective view of a collapsible jogging stroller having attached thereto the seat for embodying features of the present invention;

Figure 2 is a front perspective view of the seat shown in Figure 1 with the floating seat defining member shown in dotted lines;

Figure 3 is a back plan view of a portion of the seat shown in Figure 1, illustrating a manner of enclosing the seat defining member within the seat material;

Figure 4 is a cross-sectional view of the floating seat defining member as taken along the line 4-4 of Figure 1;

Figure 5 is a left side elevational view of the stroller shown in Figure 1 showing a child in phantom;

Figure 6 is a left side elevational view of the stroller of Figure 1 showing the stroller in a partially collapsed position; and

Figure 7 is a left side elevational view of the stroller of Figure 1 showing the stroller in an almost completely collapsed position.

DESCRIPTION

Shown and described is a unique and useful seat for a collapsible jogging stroller, or the like, that embodies features providing that the stroller can be collapsed for transportation or storage without removal of the seat. Described and shown is an example of a collapsible stroller to which the seat embodying these features be adapted, however, the only requirement is for the stroller to be constructed compatible with the seat of the invention. Accordingly, there is shown in Figures 1 and 5-7 a three-wheeled collapsible jogging stroller, generally designated 10, that is compatible with the seat of the present invention. The example stroller has a collapsible frame assembly transformable from an erected user arrangement as indicated in Figure 1 to a collapsed arrangement as indicated in Figure 7. The stroller includes a lower structural frame assembly, generally designated 20, and an upper structural frame assembly, generally designated 30, that supports the seat 50 of the invention.

The lower structural frame assembly 20 includes a rear axle member 21 coupled at opposite ends to identical removable wheels with pneumatic tires 60. A pair of upright support members 22, 23 are fixedly attached at their lower ends to the axle 21 and at their upper ends to respective ones of like configured push tube inter-connectors 44, 45. Inter-connectors 44, 45 are generally saddle-shaped and configured for enabling the stroller 10 to be collapsed as indicated in Figures 6 and 7 and described herein below. A fork assembly, generally designated 24, is pivotally coupled at one end to the rear axle member 21 by couplers 25, 26 and at the other end includes a pair of generally parallel fork tubes 27, 28 supporting the front wheel 61. Couplers 25, 26 are offset from the center of rear axle 21 so that upon collapsing the upright support members 22, 23 fold forwardly and downwardly to the outside of the fork assembly 24.

The upper frame assembly 30 includes a U-shaped handlebar 32, opposing push tubes 35, 36, inter-connectors 44, 45, opposing push tubes 37, 38 and footrest 40. Push tubes 35, 36 are connected at first ends to handlebar 32 by means of hinges 33, 34 and at second ends connected to first ends of push tubes 37, 38 by means of inter-connectors 44, 45, respectively. Second ends of push tubes 37, 38 are connected to footrest 40 which in turn is connected to front wheel 61 fork tubes 27, 28 by means of tubes 41, 42 respectively. Opposing push tubes 35, 36 are curved inwardly from hinges 33, 34 to couple to respective opposing interconnect members 44, 45. Hinges 33, 34 allow the handlebar 32 to be collapsed underneath and substantially parallel to push tubes 35, 36 as shown in Figures 6 and 7. Each interconnect member 44,45 has hold and

release means for holding the upper frame 30 in an erect user arrangement as shown in Figure 5, or for releasing push tubes 37, 38 to collapse along push tubes 37, 38 as shown in Figures 6 and 7. As indicated by the arrows in Figures 6 and 7, upon release of push tubes 37, 38 interconnect members 44, 45 slide down along push tubes 37, 38 to lower upper frame 30 over push tubes 37, 38 thus collapsing the stroller.

Essentially, when the stroller is in the erected ready-for-use position shown in Figure 1, on the right side (as viewed in the drawing) is a continuous push tube arrangement formed by push tube 35, interconnect 44 and push tube 37. On the other side a complementary push tube arrangement is formed by push tube 36, interconnect 45 and push tube 38. As seen, due to the construction of the stroller 10, there is space between the two push tube arrangements for supporting the seat 50 as will be described.

The seat 50 is attached to the stroller 10 by means of screws 62, or other suitable means, and is formed as a unitary member of flexible cloth-like material with a contour configured to the anatomy of a seated child 80 (shown in phantom in Figure 5). By reference to Figures 1 and 2, the seat 50 has a seating portion 51 and a lower leg rest portion 52. Opposed side portions 51a and 51b are fixedly attached to push tube 35, 36, respectively, each at two points by screws 62. One point is near the top of seat portion 51 and the other in advance of the respective interconnectors 44, 45. However, laterally opposed side portions 52a and 52b are attached to push tubes 37, 38 respectively, each only at one point, that is near the end of leg rest portion 52. This attachment arrangement provides that upon collapsing the stroller the seat 50 portion above the top two screws 62 above interconnects 44, 45 will remain in place whereas that seat portion therebelow is free to fold, or collapse as will be explained.

The lower leg rest portion 52 between sides 52a, 52b is formed to provide a somewhat planar leg rest. Above the leg rest portion 52 and between the sides 51a, 51b, the seat 50 is formed as a seat back portion 58 merged with a pouch like seating portion 59. As best shown in Figures 1 and 2, seating portion 51 and lower leg rest portion 52 is defined by a seat bar member 70 located at the juncture of the seating portion 51 and leg rest portion 52, and extending transversely across the leg rest portion 52. The bar member 70 serves to define the seating portion 51 and the leg rest portion 52 and provides provide lateral support to the seat 50. The bar member 70 is not attached to the frame of the stroller and thus does not impede or obstruct collapsing of the stroller 10. That is, with release of the interconnects 44, 45 and collapsing of

the upper frame 30 along the lower frame 24, the unattached bar 70 merely collapses along with the fabric of the seat 51 and leg rest 52 as indicated in Figures 6 and 7. Bar member 70 may be sewn within the fabric of the seat, as shown in Figure 3, or attached in any suitable manner externally of the fabric as indicated in Figure 4, a across-sectional view of the bar member taken along the line 4-4 of Figure 1. The bar member 70 could as well be positioned in or onto, the seat fabric such that upon collapse of the stroller bar member 70 is contained within the folds of the leg rest 52. Bar member 70 is generally formed of plastic material and may be either rigid or somewhat flexible as comfort may indicate. The seat 50 is formed of a material with suitable flexibility for folding as described yet strong enough for supporting the child therein. The seat is normally as a unitary seat, that is, the cloth material parts are not separable. A conventional child harness assembly, generally designated 90, is provided to secure the child within the seat 50.

There has been shown and described a seat for a collapsible jogging stroller or the like that does not require removal prior to collapsing of the stroller, provides lateral seating support to the user, and is formed of flexible cloth-like material that is simple and inexpensive to manufacture. The appended claims should not be limited to the herein description of the invention, it to be understood that other adaptations and modifications may be made within the spirit and scope of the invention. Further, although the description has utilized directional references, such a up, down, left, right, upwardly, downwardly, etc, these terms are utilized with reference to the orientations in the figures and are not intended to be limiting.

What is claimed is: